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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/711,326

09/10/2004

Takahiro Nakano

SIC-04-034

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DELAND LAW OFFICE

P.O. BOX 69

KLAMATH RIVER, CA 96050-0069

EXAMINER

IRVIN, THOMAS W

ART UNIT

PAPER NUMBER

3683

MAIL DATE

DELIVERY MODE

03/17/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/711,326	Applicant(s) NAKANO ET AL.	
	Examiner THOMAS W. IRVIN	Art Unit 3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The amendments to the specification were received on 27 December 2007.

These amendments are accepted by the examiner.

Claim Rejections - 35 USC § 102

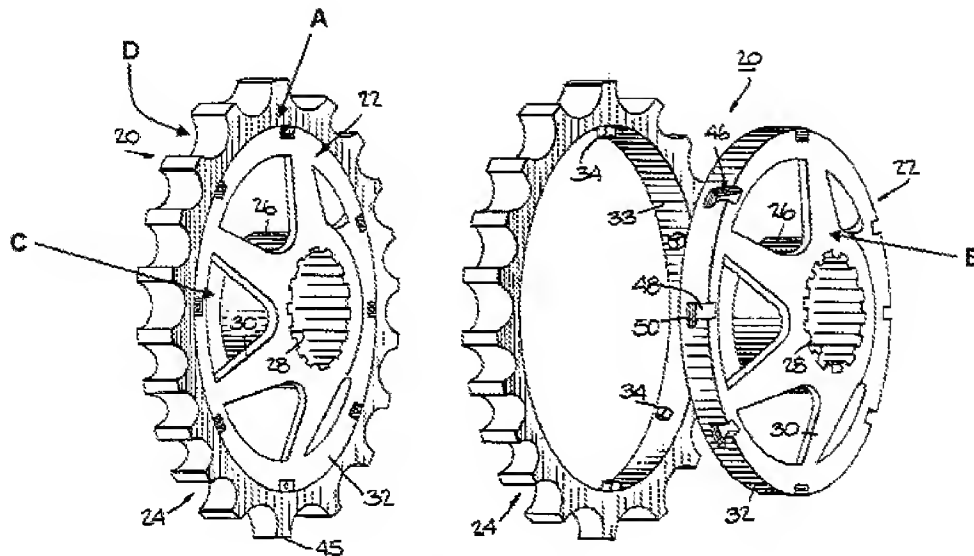
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3-11, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Militana (3,168,836).



Figs. 1 and 2 (US Patent 3,168,836)

In Re claim 1, with reference to Figs. 1 and 2 shown above, '836 discloses a bicycle sprocket, wherein the sprocket comprises: a sprocket body (20); a plurality of teeth (45) extending radially outwardly from the sprocket body; a spline (28) extending radially inwardly from the sprocket body; wherein the spline includes a radially outer surface (26) facing radially outwardly; and wherein the radially outer surface of the spline faces a radially inner surface (33) of the sprocket body.

In Re claim 3, the inner surface is substantially straight in a direction of the rotational axis.

In Re claim 4, the inner surface is substantially parallel to the rotational axis.

In Re claim 5, the sprocket body has a side wall that includes a first side wall portion (A) and a second side wall portion (B), wherein the plurality of teeth extend radially outwardly from the first side wall portion, and wherein the second side wall portion is laterally offset from the first side wall portion.

In Re claim 6, the second side wall portion overlaps the outer surface (26) when viewed in a direction parallel to the rotational axis.

In Re claim 7, the second side wall portion is spaced apart from the first side wall portion in a direction of the rotational axis.

In Re claim 8, the spline is offset from the first side wall portion in a direction of the rotational axis.

In Re claim 9, the spline extends from the second side wall portion and terminates at a free end (C), and the free end is spaced apart from a first side wall (D) of the first side wall portion (A) that faces in a same direction as the free end.

In Re claim 10, the sprocket body has a side wall that includes a first side wall portion (A) and a second side wall portion (B), wherein the plurality of teeth extend radially outwardly from the first side wall portion. It is the examiner's understanding that the second side wall portion and the spline together form a composite spline.

In Re claim 11, a thickness of the spline in a direction of the rotational axis is greater than a thickness of the second side wall portion in a direction of the rotational axis.

In Re claim 13, with reference to Figs. 1 and 2 shown above, '836 discloses a bicycle sprocket, wherein the sprocket comprises: a sprocket body (20); a plurality of teeth (45) extending radially outwardly from the sprocket body; a spline (28) extending radially inwardly from the sprocket body, wherein the spline has a root portion (30) and a radially inner portion (26), wherein the root portion extends radially inwardly of the sprocket body and has a side wall (B) facing in a rotational direction, and wherein the

radially inner portion extends radially inwardly of the root portion and has a side wall (C) facing in the rotational direction; and wherein a thickness of the radially inner portion of the spline in a direction parallel to the rotational axis is greater than a thickness of the root portion of the spline in a direction of the rotational axis.

Claims 1, 3-5, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Lim et al. (2001/0039224).

In Re claim 1, '224 disclose a bicycle sprocket (21) adapted to rotate around a rotational axis, wherein the sprocket comprises: a sprocket body; a plurality of teeth extending radially outwardly from the sprocket body and dimensioned to engage a bicycle chain; a spline extending radially inwardly from the sprocket body; wherein the spline includes a radially outer surface facing radially outwardly; and wherein the radially outer surface of the spline faces a radially inner surface of the sprocket body (see Fig. 5). The examiner defines the radially inner surface of the six openings of the sprocket to be the radially outer surface of the spline, which face a radially inward facing outer surface of the six openings of the sprocket.

In Re claim 3, the inner surface is substantially straight in a direction of the rotational axis.

In Re claim 4, the inner surface is substantially parallel to the rotational axis.

In Re claims 5 and 10, the sprocket body has a side wall that includes a first side wall portion and a second side wall portion, left and right sides of the sprocket, wherein the plurality of teeth extend radially outwardly from the first side wall portion, and

wherein the second side wall portion is laterally offset from the first side wall portion. It is believed that the second side wall portion and the spline together form a composite spline.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Militana (3,168,836).

'836 fails to teach the thickness of the root portion being substantially equal to the thickness of the first side wall portion. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have made the thickness of the root portion substantially equal to the thickness of the first side wall portion to increase the strength and rigidity of the sprocket body.

Response to Arguments

Applicant's arguments with respect to claims 1 and 13 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS W. IRVIN whose telephone number is (571)270-3095. The examiner can normally be reached on Mon-Fri 8am-4pm, Alt Fri off (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571) 272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas W. Irvin/
Examiner, Art Unit 3683

/Robert A. Siconolfi/

Supervisory Patent Examiner, Art Unit 3683